



The 18th annual meeting of the Israel Society for Astrobiology and the Study of the Origin of Life

Sunday, December 12, 2004

Faculty lounge, Faculty of Agriculture, Rehovot

Plenary Session Chairs (Opening remarks): Noam Lahav and Doron Lancet

09:00-09:45 Peter Stadler (Leipzig University, Germany) – Molecular Replicator Dynamics

Session 1 – Astrobiology Chair: Daniel Zajfman

Astrobiology in the universe - panel

9:45-10:15 Akiva Bar-Nun (TAU) – Astrobiology in the solar system

10:15-10:45 Hagai Netzer (TAU) – Extra-Solar Planets and Life: Present and Future Space Missions

10:45-11:00 **Coffee break**

11:00-11:15 Akiva Bar-Nun (TAU) - Is Methane an Indicator for Life on Mars?

11:15-11:45 Amri Wandel (HUJ) - Fermi's Paradox and Astrobiology

Session 2 - Homochirality Chair: Meir Lahav

11:45-12:15 Dina Yogev-Einot, Omer Katzenelson, Yariv Pinto and David Avnir (HUJ) - The Elusive Nature of the Concept of Homochirality

12:15-12:45 Isabelle Weissbuch, Irina Rubinstein, Ran Eliash and Meir Lahav (WIS) - Generation of Homochiral Oligopeptides within Membrane Like Environment

12:45-14:00 **Lunch break**

Session 3 - Complexity and Networks Chair: Barak Shenhav

14:00-14:30 Daniel Segrè (Harvard Medical School, Boston, USA) – Early and Contemporary Metabolism

14:30-15:00 Avshalom Elitzur (BIU) and Shahar Dolev (HUJ) – Complexity Feeds on Order: Schrödinger's "Negentropy" after Sixty Years

15:00-15:20 Gil Benko (Leipzig University, Germany) – Explicit Collision Simulation of Chemical Reactions

15:20-15:40 Doron Lancet, Ariel Solomon, Ran Kafri and Barak Shenhav (WIS) – Early Systems Biology and Prebiotic Networks

15:40-16:00 **Tea break**

Session 4 – Coding and Peptides Chair: Gideon Fleminger

16:00-16:20 Edward Trifonov (UH) - Reconstruction of the Earliest Biological Peptides

16:20-16:40 Guy Sella (HUJ) and David Ardell (Uppsala University) - The Coevolution of Genes and Genetic Codes Explains the Redundancy and Error-Correcting Properties of the Standard Genetic Code

16:40-17:00 Tsvi Tlusty (WIS) - A Colorful Origin for the Genetic Code

Concluding remarks

17:00-17:15 Iris Fry (TAU)